DRIVER

MARCH 1981

the adventure of the DAMP street

JACK THE DRIPPER HYDROPLANES INTO SHERLOCK HOLMES AND DOCTOR WATSON

THE GAME'S ASKID

DRiVER

the adventure of the DAMP street

"No mistaking it, Watson! We're on the trail of Jack the Dripper!"

Being a fictitious excerpt from the reminiscenses of

Dr. John H. Watson, concerning motoring in the springtime.

As told to Jeri Rood, DRIVER Magazine

"Friction, Watson! That's the key!"

I started from my reverie and looked over at my friend Mr. Sherlock Holmes, who stood by the hearth in his dressing gown filling his pipe from the Persian slipper.

"What?" I said.

"Friction! Without friction the cabs cannot make contact with the roads, and they slide around! I was a fool not to think of it sooner!"

I knew Holmes had been working for Inspector Lestrade of Scotland Yard on a case involving many accidents on the London streets, but he had not spoken until now, throughout the afternoon.

"We're fighting a very clever fiend here, Watson," said Holmes, seating himself in a chair.

"He's left a trail even a child could follow!"

"'Fiend?' What on earth do you mean, my dear fellow? I thought it was a simple case of motorcar accidents on damp streets."

"Ah, but what has *caused* those accidents, Watson? Or, to be more precise, '*Who* has caused those accidents?' Come, Watson! The game's afoot!" He leapt up from his chair and dashed into his room.

Ten minutes later, bundled against the springtime cold and damp, we emerged from our lodgings at 221B Baker Street.

"It's quite simple, really Watson," said Holmes. "Lestrade has been worrying for weeks about the large number of accidents, but he's been going about it all wrong. He needs to find the cause of the problem."

"What is the cause of the problem?" I asked.

"'Who,' Watson. The cause of the problem is Springtime Weather."

"Springtime Weather!" I gasped. "That arch-fiend! Known to the world, and to his victims, as . . ." The words caught in my throat.

"Yes, Watson," said Holmes, grimly. "Jack the Dripper."

The person who called himself "Jack the Dripper" was more than just a Napoleon of Crime. He was a danger to anyone who ventured onto the streets. With his power to control the elements, he could cause water to appear in any of its springtime forms — rain, ice, fog, snow. Every year at this time he would do his worst to cause suffering and mishaps. He would stop only weeks or months later, seemingly tired of his sport, when the summer months arrived. He had never been apprehended, but until now he had never been challenged by Sherlock Holmes.

As we walked, Holmes continued.

"It isn't only Jack the Dripper we have to worry about. It's the people themselves. They are unwitting allies to his work. They go out totally unprepared for the wet snow, rain and flooded streets he leaves behind to meet them."

"They need their overcoats and boots, eh, Holmes?"

"Oh, not only that, Watson. They should have their motorcars ready also. Doubtless, they have let most of their maintenance go for the winter, and now they must see to it if they want to drive safely when the Dripper's doing his wet worst."

"What sort of maintenance do you mean, Holmes?"

"Consider the snow, Watson. Many cities use salt to melt ice and snow from the roads. Very effective. But also very bad for the internal workings of motorcars! Salt will eat away at the rubber hoses in the engine compartment, and at the pipes and silencer (muffler) of the exhaust system. The car could break down, or overheat, or even begin to leak carbon monoxide gas."

"That's very dangerous stuff," I said gravely. "Could kill you, you know."

"Exactly. But for salt, the best thing to do is to keep the car clean."

He stopped and pointed to the street where motorcars were passing. "Look at those two cars, Watson. What can you deduce about their owners?"

"As you can see, Watson, these windscreen wiper blades are in first-rate condition. They will more than adequately clear off the glass."

"One's dirty and the other one's clean. They're both expensive motorcars. One man is busier than the other, and doesn't have the time."

"Brilliant, Watson, but totally wrong!" Holmes beamed at my discomfort. "It's simple pride of ownership! One man takes the time to clean his car, to keep it bright and shining. He is proud of his possession. Also, with a clean car, he can see what damage, if any, salt has done to the metal, and he can repair the car before rust sets in. The best place to wash a car at the end of the winter is at a commercial car wash where you can use the high-pressure water spray to clean out underneath the wings (fenders) and under the chassis."

I was about to ask him what "car wash" meant when he said: "The man in the dirty car is a Hungarian nobleman who has recently suffered a great tragedy."

"How do you know that?" I asked, but Holmes had hailed a cab and leapt in. I was barely able to enter the cab and close the door before it left the kerb (curb).

"Motorcar owners should also pay close attention to the car's cooling system. The hoses, as I mentioned, and the radiator itself. If the radiator

continued

DRIVER

THE
TRAFFIC SAFETY MAGAZINE
FOR THE MILITARY DRIVER

DEPARTMENT OF THE AIR FORCE
HQ AIR FORCE INSPECTION AND SAFETY CENTER
Norton Air Force Base, California 92409

HON VERNE ORR
Secretary of the Air Force

Lt Gen HOWARD W. LEAF
The Inspector General, USAF

Maj Gen HARRY FALLS, Jr.
Commander
Air Force Inspection and Safety Center

Brig Gen LELAND K. LUKENS
Director
Aerospace Safety USAF

PUBLISHED MONTHLY IN COOPERATION
WITH
THE DEPARTMENT OF THE ARMY
AND
THE DEPARTMENT OF THE NAVY

Dr. FRANCIS S. McGLADE
Director of Safety
United States Army

RADM W. B. WARWICK
Commander
Naval Safety Center

AFRP 127-1

Application to mail at Controlled Circulation Postage rates is pending at San Bernardino Postal Service, 1331 South E Street, San Bernardino, CA 92403.

Authority to publish this periodical automatically expires on 29 January 1982 unless its continuance is authorized by the approving authority prior to that date.

SUBSCRIPTION — DRIVER is published monthly and is available on subscription for $12.00 per year domestic ($1.00 per copy); $15.00 per year for foreign mailing ($1.25 per copy), through the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Back issues are not available. Changes in subscription mailings should be sent to the above address. Use of funds for printing this publication has been approved by Headquarters, United States Air Force, Department of Defense, Washington, D.C. No payment can be made for manuscripts submitted for publication. Contributions are welcomed, as are comments and criticism. Address all correspondence to the Editor, DRIVER Magazine, HQ AFISC/SEDD, Norton AFB, CA 92409.

Distribution: One copy for every 9 members of USAF.

ATTENTION DEPT OF THE NAVY PERSONNEL: Address all queries concerning distribution to NAVSAFECEN, NAS NORFOLK, VA 23511, Attn: Safety Publications Dept. All other correspondence will be welcomed by the Editor.

The contents of this magazine are informative and should not be construed as regulations, technical orders, or directives unless stated. Address reprint requests, stating intended use of material, to the Editor. The Editor reserves the right to make any editorial changes in manuscripts which will improve the material without altering the intended meaning.

The inclusion of names of any specific commercial product, commodity, or service in this publication is for information purposes only and does not imply endorsement by the Air Force.

Certain individuals shown in this magazine are not members of the Air Force and therefore do not conform to Air Force grooming standards.

MAR

VOLUME 14 NUMBER 10

CONTENTS

Features

The Adventure of the Damp Street — 1

You Bet Your Gas — 8

The 120 mph Office — 11

NHTSA Issues Revised Moped Guidelines — 12

Winning — 14

Bondurant U — 18

Better Safe Than Sorry — 21

Air Sense Brought Down To Earth — 27

Wild Bill Hickok — Back Cover

Departments

Double Clutch — 3

How It Happens — 13

Timely Topics — 20

The Backyard Mechanic — 22

Backfire — 28

COL. WARREN L. BUSCH Chief, Safety Education Division		VIRGINIA HENDRIX Editor	
TSgt RON LATHROP Technical Editor	JERI ROOD Feature Editor	ALICE MILKEY Editorial Assistant	DON KELLEHER Art Director
	LORRAINE HAMBLEN Staff Artist	CLIFF MUNKACSY Staff Photographer	

THE EDITOR SPEAKS

DOUBLE CLUTCH

AIR BAG BATTLE CHANGES NOTHING

Twice in the last eight months we have devoted this column to what the auto industry calls the air-bag war. In August we asked "Is there an air bag in your future?" and answered our question with a rather emphatic "No, not for several years unless you're planning on a 1983 Mercedes-Benz."

But a few months later the air-bag war seemed to be swinging the other way. Congress was actively considering revisions which would require Ford, GM and the high-volume imports to offer bags on at least one of their 1982 car lines and, more important, would require the phase in of either bags or automatic belts on small cars first in '82 rather than on larger cars as originally specified. We reported all that to you in the December issue.

However, after Congress spent a lot of time thinking about the auto industry's depressed financial condition, holding House-Senate conference committee meetings, drafting compromise legislation, and taking votes, what happened was exactly nothing. Automakers face the same standards and deadlines now they did in 1979: Passive restraints (that means either automatic belts or air bags) must be in large cars in 1982, in medium-size cars by 1983, and in small cars by 1984.

Is this the final word? Probably not. Air bag legislation will surely come up again this year. But there may be a few straws in the wind. The General Accounting Office (the investigative arm of Congress) has issued a widely publicized report that says three-point belts are three times more effective than air bags in rear impacts, four times more effective in side impacts, and 15 times more effective in rollovers. Several Congressmen recently have said that Congress should not be in the business of legislating technology. And, as we get ready to go to press, the administration has called for a reexamination of the entire passive restraint requirement and a possible moratorium on the standard.

From here the usual word: Fasten the belts you already have.

HOW DO YOU USE YOUR BICYCLE?

Do you commute or shop by bicycle? We'd like to know why you do it, how long you've been doing it, how far you pedal, and in what kinds of weather. How do you cope with rain, heavy traffic, steep hills, narrow roads? What are the pleasures and benefits?

Have you discovered or invented any gadgets that make biking easier or safer? Do you use any protective gear?

Please share your experiences with DRIVER, AFISC/SEDD, Norton AFB, Ca. 92409.

the adventure of the damp street

continued

"However, the tread on these tyres is less than perfect. One must have good tread, and the proper inflation pressure in the tyres, to avoid hydroplaning, or wet skidding."

is leaking, the car could overheat. The car's accumulator (battery) should be kept filled with water, up to the indicator marks. A weak accumulator should be recharged or replaced.

"An oil change could be in order, if none has been accomplished in the past 6,000 miles, along with the replacement of the old filter. One should always change the oil filter when one replaces the oil supply, Watson. In the springtime, they should also check the other filters and all the fluid levels in the motor before closing the bonnet (hood)."

"How did you learn so much about motorcars?" I asked.

"Ah, they aren't that complicated, Watson. People just think they are. Most of the problems they encounter could be averted through the use of a little brain power and some basic maintenance.

continued

the adventure of the damp street

continued

"Hydroplaning is nothing to become overly concerned about, if one remembers to keep one's speed down and to steer into any skid."

"Take the wipers on the motorcar's windscreen (windshield) as an example. These are very important for visibility on rainy days when the Dripper could catch one off guard. If the rubber is cracked and crumbling, they should be replaced. Or if they appear supple, but they smear the windscreen, they should be replaced. Best to be able to see the Dripper's puddles and washed out roads before one encounters them.

"And another important item often overlooked is misalignment of the motorcar's front wheels."

"How's that happen, Holmes?"

"It often occurs over time, but winter increases the likelihood of this problem. Layers of ice and snow, along with the ruts and bumps that form from travel of motorcars, may batter the wheels out of alignment after a few months of such treatment. This results in poor steering and increased wear of the tyres (tires)."

"How does one know if the wheels are misaligned?"

"Quite simple, Watson. One can look at the wear of the tyre's tread. If it's uneven — worn more at one edge than the other, misalignment is a probable cause.

"But perhaps a better way is to drive along on a straight, level stretch of deserted road at a slow speed. If one takes one's hands off the steering wheel for an instant, one may be able to see. The car may veer to the left or the right; if so, the wheels are out of alignment."

"That's brilliant, Holmes!"

"Quite elementary, Watson. The important thing is that alignment problems are dangerous and should be repaired at once. They can also be expensive, because the tyres will wear out. An alignment is cheaper than a set of steel-belted radials."

"'Steel-' what?" I said.

"No time, Watson," said Holmes as he left the cab. "We've arrived!"

Indeed we had, at Scotland Yard Headquarters.

"Holmes!" I cried, trying to keep up with his long strides. "You haven't explained why we've come all the way down here. You usually have Lestrade visit us."

"Quite simple, Watson. He couldn't bring his entire crime laboratory to Baker Street, and there is something of the utmost importance for us to see in that laboratory."

He spoke no more until we had entered the office of Inspector Lestrade. That small, rat-faced detective thanked Holmes profusely for coming and then led us to one of the Yard's laboratories. There, we found an assortment of motorcar tyres.

"I can't figure it out, Mister Holmes," said Lestrade. "What could have made all those cars have accidents? Jack the Dripper taunted us by telling us to check the tyres. I'm baffled."

"It is simplicity itself, Lestrade," said Holmes, as they took his glass from his pocket and began to examine the tyres. "Each one of these tyres has insufficient tread to hold the road when the Dripper strikes. Application of only a slight amount of water on the road would make them all hydroplane uncontrollably."

"'Hydroplane,' Holmes? What's that?" I asked.

"A practical demonstration would be in order there, Watson. But for now, look at the tread on those tyres. What is tread for?"

"For traction, surely," I answered immediately.

"Quite," said he, "but only on wet surfaces. On dry streets, these nearly-bald tyres would give *better* traction than would tyres with new tread. Treadless tyres, or 'slicks,' are excellent for traction on dry roads. However, for wet conditions, the tread is there to keep the car in contact with the road."

"How does that happen, Mister Holmes?" said Lestrade.

"The tread allows the water to *flow through* as the car moves, instead of building up in front of the tyre. If the water pressure builds up in front of the tyre, it will actually lift the car off the road. The entire weight of the car, or perhaps only part of it, will be supported by the water and the car will be literally skidding along out of the driver's control. This is what is called 'hydroplaning.' Now for that practical demonstration . . ."

Holmes borrowed the keys to a motorcar and we ventured out onto the rain-drenched streets. Holmes was at the wheel, because the cold, damp weather made my shoulder, with its old Jezail bullet wound, ache intolerably.

"You see, Watson," said Holmes as he steered the car expertly away from populated areas, "hydroplaning is one of the Dripper's greatest tricks. As I mentioned, hydroplaning occurs when the water pressure builds up excessively in front of tyres. But there are several factors that will affect whether this happens. One is the tread, as I said before. Another is the internal air pressure of the tyres. If the tyres are underinflated, they will be more prone to hydroplaning. Tyres must always be kept at the proper inflation pressure.

"Another factor is the speed at which one travels. The greater one's velocity, the greater the chances of hydroplaning. The final factor is the amount of water on the road. Obviously, the more water, the worse the risk, but that's the Dripper's department. The driver can't control that. He can, however, control his speed and the air pressure. He can also control the amount of tread on the tyres by replacing them when needed."

With that, Holmes proceeded into his "practical demonstration" of hydroplaning. He accelerated the car to a point above the maximum legal speed and then turned the wheel only slightly. Our motorcar began to swerve left and right, imitating the action of a fish in the water. Holmes steered slightly to the right when the car's tail was moving toward the right, and to the left when it went in that direction.

"When one begins to hydroplane," he stated calmly as he worked, "one must not panic. One must simply steer *into* the skid, as you see me doing here. One must also *ease* one's foot off the accelerator pedal, and refrain from applying any braking. Braking could make the skid worse."

"Yes, this is quite bad enough, thank you," I said uncomfortably.

"Oh, my dear fellow, I do apologize," he said, stopping the motorcar. "Hydroplaning is a frightening experience, unless one is prepared for it.

"My word, Holmes! Look out!"

"While we are stopped, allow me to mention another frightening possibility — inadequate brakes. I neglected to cite brakes when I told you about maintenance earlier. These should be examined regularly, and tested to insure that they apply equally on both sides of the car.

"A further hazard is wet brakes. If the driver is not very careful, he might dampen the brakes in one of these puddles that the Dripper leaves lying about. Wet brakes are almost totally ineffective. To avoid this problem, the driver must avoid deep water, and he must use caution when driving through these puddles. He should go through a puddle only very slowly, so as not to splash the water onto the braking surfaces.

"If he should find himself with wet brakes, he can dry them out fairly quickly, however. He should drive along at a slow speed, applying the brake pedal slightly with the left foot, only enough to cause the brakes to make contact with the drums. The friction will dry the brakes. This same method can be used when driving through puddles, to keep the brakes from getting wet in the first place.

"Of course," he added, "this should be practiced in dry weather, before the Dripper strikes, to insure the driver knows how much pressure to exert on the brake pedal. It's the only safe way. And speaking of safety, I believe we shall skip the practical demonstration of wet brakes."

"Thank you," I said.

"Of course, Watson!" he said as he started away again. "Actually, the key to avoiding the wet traps of Jack the Dripper is simple caution. One must drive slowly when he's about with his rainstorms and wet springtime snow. Driving slowly gives one more time to think and to react to the changing scene around. For example, one cannot be sure when the Dripper will change his rain into sleet, or even cool things off enough to freeze the water on the streets. Ice, especially when covered with a layer of water, can be treacherous."

It seemed the Dripper was listening, because the weather suddenly changed from drab greyness to an increasingly heavy rain.

"An excellent opportunity to tell you about the advantages of good wipers, Watson," said Holmes, as he turned a switch on the dashboard. "These are first-rate. Notice how well they clear the water off the windscreen. Of course, good wipers are not enough in some situations, as we're about to discover." No sooner had he spoken than a small roadster passed us rapidly and splashed the entire motorcar with water from the road.

"Water from the road surface is normally very dirty, and we must activate the windscreen washer or risk having reduced vision." He turned another switch and a spray hit the glass.

"Motorcar owners should insure that the washer reservoir is filled at all times with the proper mixture of washer solution and water. Also, at times when spattered water obscures one's view, one should slow down until the wipers clear the glass again. Ah, there's a greater danger ahead, Watson. The road is completely covered with water. We must turn around."

"Couldn't we just drive through it slowly, as you said before?"

"Too dangerous, Watson. Running water has very great force and we could be washed off the road, as that small roadster is experiencing."

continued

the adventure of the damp street

continued

It was true. The car that had passed us was sliding away, out of sight toward the River Thames.

"Remind me to report that when we get back to the police headquarters, Watson," said Holmes as we turned around to return to the city.

"Of course. Look, Holmes. There's a puddle ahead."

We drove through slowly, but we were jarred as the wheel hit something.

"My mistake, Watson! We must have encountered a hidden pothole."

"Lots of those around in spring. What causes them?"

"They're one of Jack the Dripper's favorite surprises, Watson. He allows water to seep under the street pavement and then when he freezes it, the ice underneath pushes up the pavement. Then the constant freezing and thawing during winter and spring cracks and weakens the pavement. The weight of a car passing over that spot will cause the pavement to cave in. Of course, further traffic hitting that spot makes it worse. And, as we've discovered, rain will sometimes hide the hole beneath a puddle of water. Best to steer clear of anything but the shallowest of puddles."

"But couldn't avoiding a puddle be dangerous also?"

"Excellent thinking, Watson! When one drives around a hazard, one must always insure that one is not moving into someone else's path. Caution, as I said, is the key. That and flexibility. One must always be alert for the unexpected."

"Sudden changes in the weather?"

"Certainly. Nothing the Dripper likes better than to keep people guessing. They go out expecting at most a light drizzle and he gives them a downpour. And thunderstorms bring to mind lightning. What would you do if you encountered a lightning storm while you were driving, Watson?"

I thought a moment. "I would abandon the car because it's made of metal, and I would seek shelter elsewhere."

"Then you would be very unwise," he responded with a gleam in his eye. "You should stay in the car because the lightning, if it hit your vehicle, would travel along the car's body and then jump to the ground. You would be much safer in the car than in the open. Of course, it would be foolish to touch any metal part of the interior at such times, as this would make you a part of the circuit of the electricity."

"This ordinary sponge should take a bit of the dampness out of him, eh, Watson?"

"That's brilliant, Holmes!"

"Rather shocking experience, that," I said, but Holmes failed to note my humour.

"Another sudden change that might occur is fog," said Holmes. "The Dripper's responsible for that, too. Fog, is, of course, simply a cloud that is hovering at ground level. Aside from being damp, it is also dangerous. If one must travel during foggy weather, one should keep one's headlights burning to show others one's position, and one should drive slowly to avoid any unexpected hazards."

(Editor's Note: We have omitted most of Mr. Holmes discussion of fog, as we dealt with that problem in the February 1981 DRIVER.)

"One's headlights are extremely important in this kind of weather," said Holmes. "When the clouds are this dark, one needs them even in the daylight. Therefore, one must insure they are kept clean so that they illuminate sufficiently. Further, one must take care to keep them properly aimed. A slight amount of misaiming can either reduce one's range of vision, or perhaps blind other drivers.

"Another form of glare appears when the weather clears. Until the moisture dries from the streets, bright sunlight can reflect off the water and become quite dazzling. Sunglasses are in order at such times."

"This has been most enlightening, Holmes," I said as we neared the headquarters of Scotland Yard again. "I only wish I could interest the Strand Magazine in your thoughts on the subject. 'Preparation, slow driving, and being ready for the unexpected,' eh, Holmes?"

"Not one of your better titles, Watson, but I'm sure you'll think of something."

The fog was thickening as we emerged once again from Scotland Yard.

"The Dripper is near, Watson. I sense it."

I glanced about, but the fog was becoming so thick that I had difficulty seeing Holmes, though he was standing by my side.

"How will we find him, Holmes?"

"Oh, I suspect he will find us. He always makes the first move. But when he does, we shall strike. We shall dry him up." He reached under his cape and produced a large sponge.

"Ingenious, Holmes!" I said.

"Elementary, my dear Watson."

With that, he strode off into the fog. The hunt was on.

"Visibility is at a premium on days such as this. Windscreen wipers and defogger are our principal weapons against water."

"Notice what overzealous driving will get you. This chap has hydroplaned off the road and into the bushes."

"Some drivers find it necessary to splash all the water from the road onto your motorcar. Be on guard."

"Highways deserve special respect in the rain, both for the volume of traffic and for the high speed at which it travels."

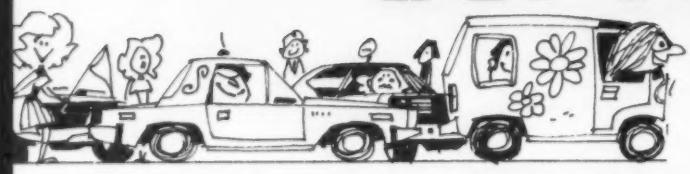
(right)
"Allow extra room behind the car in front on wet streets. Also, be prepared for erratic maneuvers from other cars."

(below)
"Although it may be permissible to drive through shallow puddles, it is foolhardy to attempt to ford a flooded road. The running water could wash your car away."

DRIVER Magazine wishes to thank those who assisted us with the photographs for this article: Our Sherlock Holmes, Stuart Campbell of San Bernardino Valley College, who not only starred, but also provided costumes from the SBVC Drama Department; our Dr. Watson, DRIVER's own Clifford Munkacsy, who is equally skilled on both sides of the camera; and Brig. Gen. John Halki, Director of Medical Inspection, AFISC, for a pipe from his collection.

"Say the magic word and get 100 gallons."

YOU BET YOUR GAS



1.

Which of the following is true?

A. Slowing from 70 mph to 55 will save you 6 cents on every gallon of gas.

B. Keeping your car tuned saves you 4 cents on each gallon.

C. Using radial tires and keeping them properly inflated saves you 5 cents on each gallon.

Answer: All are true. You save because you are using less gas and making each gallon go further. These figures are estimates of the U.S. Department of Energy, who say you can save up to 15 cents on every gallon of gasoline, just by following some good driving tips.

2.

Matching: What percentage of the average American's driving is done on each of the following:

1. Social and Recreational
2. Educational-Civic-Religion
3. Earning a living
4. Family business

a. 42 percent
b. 33 percent
c. 19 percent
d. 5 percent

Answer: 1.b., 2.d., 3.a., 4.c.

3.

True or False: The new car of today gets 51 percent better gasoline mileage than the average new 1974 car.

Answer: True.

4.

The most fuel-efficient speed is:

A. 65-70 mph
B. 55 mph
C. 35-45 mph
D. 20 mph

Answer: C. Thought it might be 55, didn't you? 35 to 45 mph is too slow for freeway driving, and testing has shown that 55 is a good compromise between speed and fuel savings. Your car gets 18 percent better mileage at 50 than at 65 mph, and 20 percent better mileage at 55 than at 70 mph.

5.

If your car must idle for longer than about 30 seconds, you should shut it off. Why?

Answer: Because while you're idling, your car gets zero miles to the gallon. And it is cheaper, in terms of fuel consumption, to restart the car than to idle for longer than 30 seconds when, for instance, you are waiting in a drive-in line. Also, don't spend too much time idling the car in the morning to get it warmed up. It's much more efficient to drive slowly for a few minutes the first thing in the morning. Idling uses up a quart of gas every 15 minutes.

6.

The person who floors it from a stoplight is called:

A. An idiot
B. A lead-foot
C. A hotrodder
D. Rich

Answer: All could be correct, but notice answer D in particular. "Jack-rabbit" starts are extremely wasteful of gasoline, and you have to be rich to afford such extravagance. Hotrodding and rapid acceleration in city traffic can increase your consumption of gas by two miles per gallon. Can you afford that?

or Beat the Gauge or The 64-Gallon Question or Gas-Word or Family Fuel (A gas-saving quiz)

7.

What oil should you use in your car?

A. A multi-weight, because it's cheaper.

B. A single weight, because it lubricates better.

C. Either; it makes no difference.

Answer: All are wrong. Multi-weight is the best, but it is not cheaper. A multi-weight, like 10W-30 or 10W-40 helps reduce internal engine friction, and therefore gives better gas mileage. However, do not use an oil of a higher viscosity than recommended in your owner's manual, because heavier oils tend to increase friction and decrease miles per gallon. For winters in cold climates, use a lower viscosity oil like 5W-30 to keep the parts turning freely.

8.

True or False: The octane rating of gasoline is unimportant in these days of unleaded gas.

Answer: False. All gas has octane, even unleaded, and the octane ratings *are* important. You should use a gasoline with just enough octane so your gas doesn't "knock" or "ping." Many gas stations have discontinued the premium pump and have replaced it with a "super no-lead" pump. Use that kind only if your car knocks too much on the ordinary unleaded.

9.

How much better gas mileage can be expected when you have a car that is properly tuned?

A. 4 percent
B. 12 percent
C. 16 percent
D. 20 percent.

Answer: Actually, the correct answer is somewhere in between A and B.

10.

Which consumes more gasoline — driving with the air conditioning on, or driving with the windows open (and thereby creating additional drag on the car from wind resistance)?

Answer: The air conditioner causes more consumption of gasoline — unless you are driving on a highway at high speed, when the wind resistance factor comes into play. At that time, the air conditioner is actually a fuel saver. At all other times, avoid using the AC unless it is absolutely necessary. The same goes for any accessory that uses power.

11.

What gear is more economical of gasoline — high or low?

Answer: High. Therefore, the idea is to get into high gear as quickly and smoothly as you can. In a car with a manual transmission, get through the lower gears gently and quickly and accelerate in high. This means, do not try for maximum acceleration in each gear. With an automatic transmission, give the gas pedal enough pressure to get the car moving and then ease off, to get the car to shift into the higher gears.

12.

True or False: Excessive braking means excessive usage of gasoline.

Answer: True. Does this sound dumb? Consider this: If you have to brake too much, you were going too fast. Say that you're driving in traffic and you see the light ahead is turning red. You know you're going to have to slow down and stop. So do you continue at the same rate and brake hard when you reach the line of cars at the intersection? A better way is to ease off the accelerator and coast. You will not be using additional gasoline and the car's momentum will carry you forward. The car will be slowing down also. Then you can brake from a moderate speed to stop the car as you reach the intersection. Another thing: By slowing down in advance, you give the light a chance to change back to green and you might not have to stop at all.

13.

According to the Federal Highway Administration, how much gas could be saved each year if all Americans would hold their speed to 55 mph?

A. 50 million gallons
B. 200 million gallons
C. 3 billion gallons
D. No real savings would result.

Answer: C. Doesn't that make you think twice about putting your foot down (on the accelerator)?

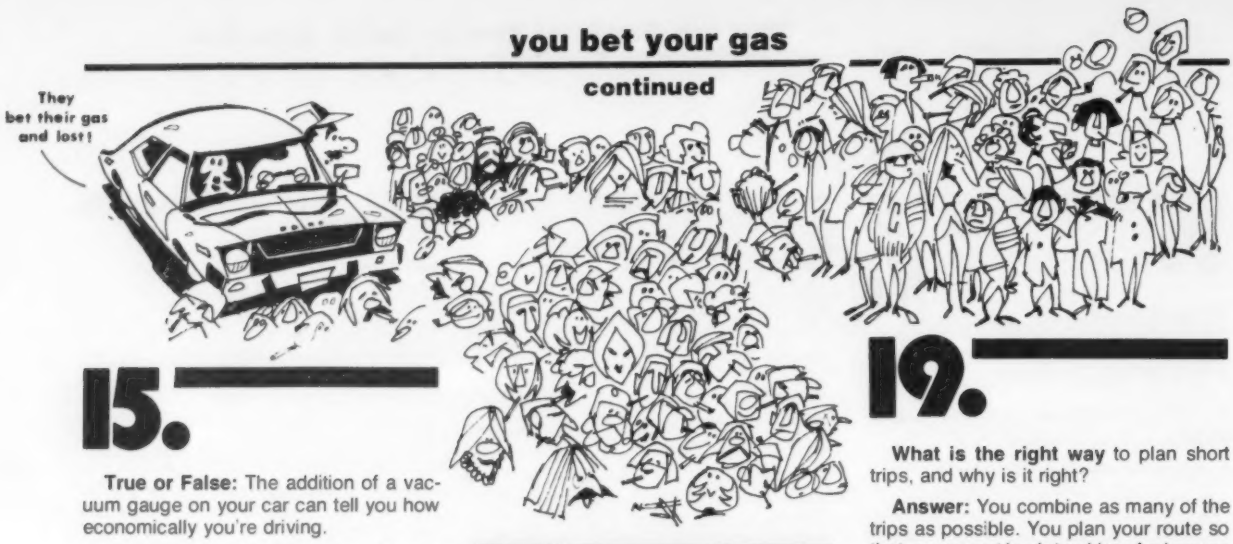
14.

Which of the following creates a drag?

A. Driving with one foot on the brake, or failing to completely disengage the hand brake.
B. Roof racks packed with suitcases
C. Underinflated tires
D. Too much weight in the car, especially unevenly distributed.

Answer: All of them.

continued



15.

True or False: The addition of a vacuum gauge on your car can tell you how economically you're driving.

Answer: True. Nature may abhor a vacuum, but your car doesn't. A car gets its best mileage when the vacuum reading is high, as registered on a vacuum gauge. With such a gauge, you could learn to drive to maintain the highest possible reading at all times. (See January 1980 DRIVER's Backyard Mechanic for more words on the vacuum gauge.)

16.

Which of the following will *not* contribute to increased fuel economy?

A. Low vehicle weight
B. Small engine
C. Manual transmission
D. Low numerical axle ratio
E. Small frontal area

Answer: It was a trick. All of the above will aid mileage. One thing you can do to increase mileage is to choose carefully the next time you purchase a new car. Write to the Consumer Information Center, Pueblo, Colo. 81009, for a Gas Mileage Guide (specify whether you want the guide for California cars or the 49-state version). The booklet contains miles-per-gallon estimates which are based on the Environmental Protection Agency's standardized test. Of course, your own fuel economy will depend on how and where you drive.

If you're shopping for a used car, check the auto magazines and the buyers' guides of the consumer testing groups for information on what cars to buy and which to avoid. For economy, pick a car that is lightweight and has the fewest number of cylinders you can get by with. If most of your driving is on the highway, get a manual transmission. And avoid the power options.

17.

Which of the following is true?

1. The kind of tires you have on the car makes no difference to the fuel economy.
2. Changing to radial tires will increase your fuel economy.

Answer: The second statement is true. Radial tires can add between .5 and 1 mile to each gallon of gas. The reason is that radial tires are constructed so that they have less "rolling resistance," that is, it takes less fuel to get them to move. They do cost more than conventional tires, but their cost can be made up for in greater gas savings and longer tread life (they *do* wear longer).

18.

The two-second rule is important for fuel economy because:

A. It teaches you to count.
B. When you use it, you avoid unnecessary braking.
C. You learn to pace yourself.

Answer: Try B or C. For those of you who don't know, the "two-second rule" is a method by which you create a cushion of space around your car for safety. When the car ahead of you passes a stationary object, you count to two ("One thousand-and-one, one-thousand-and-two") before you go past that same object. Then, you are maintaining the proper distance. As we mentioned before, unnecessary braking wastes gas. If you keep back and don't tailgate, you have time and space to react to changing traffic situations, and you don't have to do as much braking.

19.

What is the right way to plan short trips, and why is it right?

Answer: You combine as many of the trips as possible. You plan your route so that you are not back-tracking. And you go first to the destination that is farthest. The reason for this last rule is that it gives your car a chance to be fully warmed up, at which time the car gets its best mileage. Also, a warm car will require very little gas for a re-start. So, by this method, even though you may be making a lot of short hops, you are doing them in the most economical manner possible. Another thing: Plan your trips so you miss the hours of peak traffic. Stop-and-start driving is the worst kind for your mileage.

20.

Which of the following is a good reason for not car-pooling?

A. I'm grumpy in the morning.
B. I sometimes need the car during the day.
C. I go to work early (or leave early).
D. I don't know anyone in my area to ride with.
E. I can't stand to ride with other drivers; they make me nervous.
F. I don't like to wait for anyone.

Answer: Some of these may be valid, but then again they may not. If you examine your excuses, you'll probably find that most of them are just that, excuses. Most employers will assit you in setting up a car pool if you don't know anyone to pool with, or if you have odd hours. The rest of your "reasons" would probably disappear when you saw how much gasoline pooling would save you.

What was the magic word? ECONOMY. We don't know if *saying* it will give you 100 gallons, but practicing it will save you a lot in the long run.

The 120 mph office

TSgt Wayne Smith concentrates very hard when he's in his office. He has to. One minute he will be sitting still and the next he and his office will be coasting down a narrow ribbon of asphalt at more than 120 mph.

No, this is not Sergeant Smith's office at the 532nd Field Training Detachment on Holloman AFB, N.M. It's his weekend office. The one where he sits behind the wheel of a 1967 Camaro.

But it is no ordinary Camaro. This Camaro's 327 cubic inch engine has been enlarged to 331 c.i. and with other modifications now produces an estimated 650 horsepower. That power is pushed through a Turbo Action automatic transmission coupled to a ATI converter and into a set of 5.57 gears before it reaches the pavement via a set of wide treadless tires called "slicks."

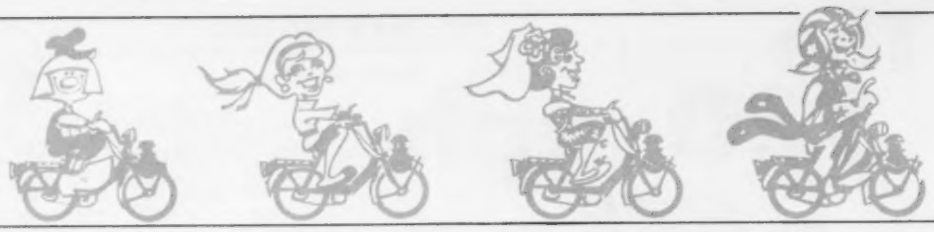
The combination of Smith and the Camaro have covered a ¼-mile distance in 11.27 seconds topping the traps at more than 120 mph.

During 1980 Smith won double-C modified production automatic (CC/MPA) honors five times at the national level. These class wins came during American Hot Rod Association (AHRA) competition at the AHRA Winternationals, Tucson, Ariz.; AHRA Springnationals, Tulsa, Okla.; AHRA Nationals, San Antonio, Texas; AHRA Summer Nationals, Kansas City, Mo.; and AHRA World Finals, Spokane, Wash.

He also competed for AHRA Super Street Eliminator honors and had a substantial point lead in that division through the June event in San Antonio. However, luck turned on him during the first three days of August in Kansas City. There the engine developed valve spring problems. The next weekend in Denver he left the starting line before the light turned green and red-lighted, which disqualified him. By then he had dropped to fourth in the standings.

The following weekend at the World Finals in Spokane, Smith was running strong until the meet director ordered competition to continue in the rain. Just after Smith's run conditions deteriorated until the finals were held over until Monday. Smith's request for a re-run because of the bad weather was turned down, but he had earned enough points to finish third on the season.

(below)
Strapped into his seat wearing a safety helmet and protected by a large roll bar, TSgt Wayne Smith starts another run down a ¼-mile drag strip. With 923 such runs in two years, Smith has nothing but praise for the companies that supplied the materials and parts that went into his $15,000 Camaro, as well as those people and companies that supported his attempt at the AHRA Super Street Eliminator crown in 1980.



Two years after proposing a series of rules for moped operation, the National Highway Traffic Safety Administration (NHTSA) has issued final guidelines to states for regulating these vehicles. Under the new guidelines, a moped is defined as "a motor-driven vehicle both with pedals to permit propulsion by human power and with a motor which produces (power) not to exceed two brake horsepower and which is not capable of propelling the vehicle at a speed in excess of 30 mph (48 km/hr) on level ground."

A number of the final guidelines are essentially unchanged from the 1978 proposal. These include the recommended requirement that moped operators obey all applicable traffic laws, and have the same insurance requirements and financial liability as drivers of other motor vehicles.

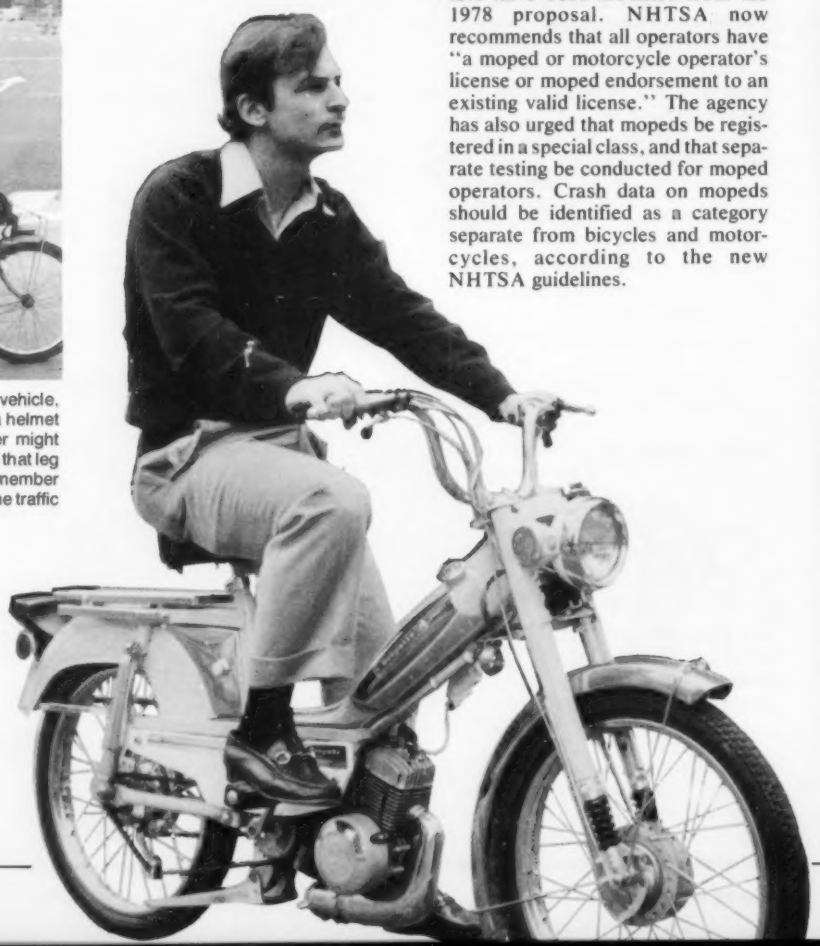
NHTSA has retained a recommendation that a handbook on moped driving practices and legal requirements be prepared. Motorcycle safety education programs should include information on moped operation, and this information should also be incorporated into high school and adult driver education courses, the safety agency urged.

Also unchanged from the 1978 proposal is the recommendation that passengers be prohibited on mopeds unless the vehicle is specifically designed to carry passengers. All moped drivers are encouraged to make themselves as visible as possible to other drivers.

New and revised recommendations

The guidelines for licensing and test requirements for moped operators have been modified from the 1978 proposal. NHTSA now recommends that all operators have "a moped or motorcycle operator's license or moped endorsement to an existing valid license." The agency has also urged that mopeds be registered in a special class, and that separate testing be conducted for moped operators. Crash data on mopeds should be identified as a category separate from bicycles and motorcycles, according to the new NHTSA guidelines.

If you ride any kind of two-wheel vehicle, eventually you're going to spill. Wear a helmet plus eye protection. This woman rider might save herself a lot of pain by covering all that leg and thigh skin with a pair of jeans. Remember that the moped rider must obey the same traffic laws as the motorist.

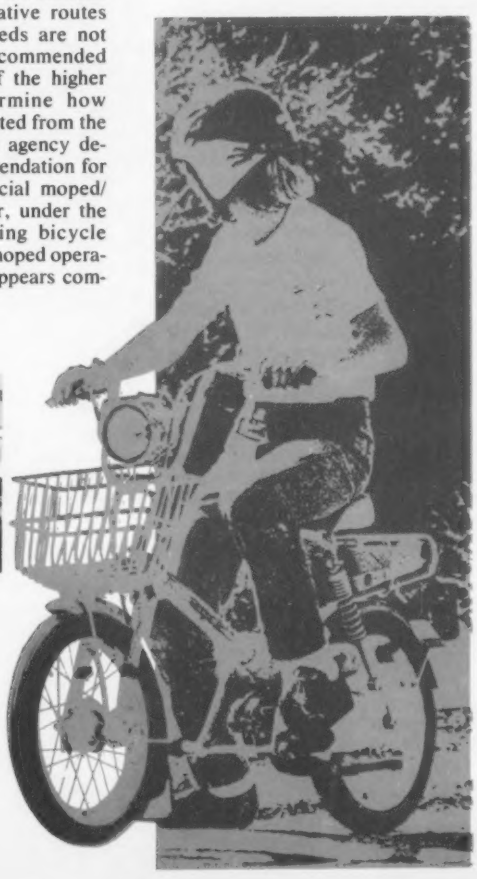


NHTSA issues revised MOPED guidelines

Moped operators should wear protective headgear. This recommendation has been broadened from the earlier proposal which would have specifically required bicycle or motorcycle headgear for moped operators. A new provision has also been added, recommending that moped drivers be required to "wear some form of eye protection device . . . unless the moped is equipped with a windscreen."

NHTSA has urged states to restrict mopeds to speed capabilities of 30 mph and under. As in 1978, the agency also recommended that mopeds be prohibited from roadways where the speed limit exceeds 35 mph. Where alternative routes suitable for lower speeds are not available, NHTSA recommended engineering analyses of the higher speed roads to determine how mopeds could be separated from the faster traffic flow. The agency deleted an earlier recommendation for the designation of special moped/bicycle lanes. However, under the new guidelines, existing bicycle lanes could be used by moped operators "where joint use appears compatible."

These guidelines were prompted by the growing number of mopeds in use, and by the rising number of fatalities as a result of moped crashes. There are now an estimated one million mopeds on U.S. roadways (up from 25,000 in 1974), and the number is expected to reach 2½ million within the next four years. By 1984, NHTSA predicted, an estimated 1,200 fatalities could result annually from moped crashes, assuming ridership increases as expected.



HOW IT HAPPENS!

A light rain is falling and the sky is so gray it looks like dusk at 3 p.m. Airman First Class Dave Javu is late for a dental appointment. He is worried about the possibility of extensive work in the chair, and he is annoyed that his supervisor almost didn't let him go at all.

He comes up behind a slow-moving rental truck in the right lane, and has to slow down. Since there is no one else nearby, he moves into the left lane to go around. As he accelerates, the rear of his car swerves to the right. He steers right, into the swerve, to avoid hitting the truck, which is now beside him. He fails. He crunches the right side of his car against the truck. Both drivers stop and try to remember their insurance agents' phone numbers.

What was probably going to be a little minor dental work has now turned into an expensive accident. A1C Javu had too many other things on his mind for safe driving in the rainy conditions present. He was in a hurry, and he drove too fast on a slippery road. The dentist would have waited; his supervisor would have cooled off. And A1C Javu could have passed the truck safely if he'd accelerated more gradually.

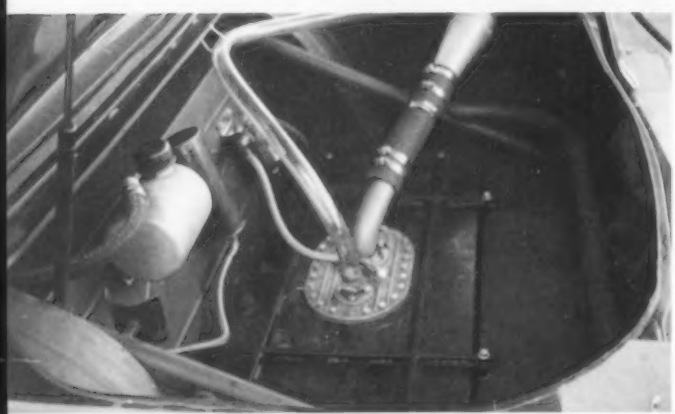
Racing drivers spell SAFETY Winning

Racing drivers are more safety conscious than anybody. They have to be. At the speeds they travel the smallest error can be costly. Their safety approach to winning races provides valuable lessons for all drivers.

Now don't get the idea that racing drivers spend all their waking hours thinking about accidents — they don't. In fact, if they did, they probably wouldn't get near a race car. They also wouldn't think about getting in a passenger vehicle, on a motorcycle or crossing the street. Anybody who spends all his time worrying about accidents knows these activities are far too dangerous.

What racing drivers do concern themselves with is winning. Winning is a matter of getting all the basics right. The first basic is that you must finish the race to win. And this is what makes racing drivers super-safety-conscious.

Safety is averting injury or loss. If a driver injures himself or his machine he is not going to finish the race. And if he doesn't finish, he can't win. For racing drivers winning is not every-



(left)
Inside a stock car racing trunk there is additional roll cage bracing as well as the reinforced fuel tank, fast filler neck, overflow tube and fuel line. Inside the metal fuel tank **(above)** is a special plastic liner that contains the sponge-like fuel cell that keeps gasoline from leaking during an accident.

Windshield braces keep the window from being blown in on the driver at speeds approaching 200 mph.

Bobby Allison (#28) posted the last win for the large, 115-inch wheelbase Grand National stock cars.

thing because it is the only thing. After all, noboby remembers who finished second, right?

Street driving has a first basic rule similar to racing's: *Drive to arrive.* There's no sense going on even the shortest trip if carelessness keeps you from getting to where you were going.

To avoid any harm that could result in not winning, race drivers concentrate intensely on their total environment. They pay special attention to the road surface for anything that might damage their machine. They watch the traffic around them for threatening moves. And they are atune to their machine — almost a part of the vehicle — so that they can sense the first sign of component failure.

But more importantly, winning race drivers don't ignore or shrug off any of these factors. If the track surface doesn't look exactly right — it appears dusty or shines as though wet — they slow down and tip-toe around or carefully over the questionable area. If a competitor has been making erratic movements they steer clear. And if the motor doesn't sound crisp or the handling doesn't feel right, they stop at the pits immediately. To win they must finish and a broken machine can't go the distance.

Those are good safety examples for all drivers to follow. If the road doesn't look exactly as you think it should, slow down. If another driver has been making unusual movements, stay out of the way. And should something not seem right about your vehicle's ability to perform, stop and have it checked as soon as possible.

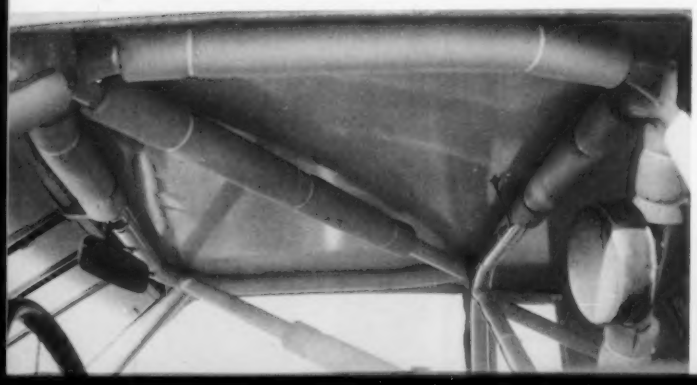
However, for race drivers there comes a time when something goes wrong. If the resulting impact is minor enough and the safety factors strong enough, the driver and machine will be able to continue on to finish the event. If the impact is severe, but the safety factors strong, then the driver and machine will return to competition some other day. Hopefully, at the worst the machine will be junk but the driver will survive.

When it comes to safety factors, none compares with those found in the National Association for Stock Car Auto Racing (NASCAR).

To begin with, the driver wears fireproof underwear and wraps himself in fireproof coveralls, gloves and shoes. He protects his head with a competition-approved safety helmet. And even though NASCAR racing vehicles have roofs and windshields, the driver wears goggles to keep dirt from blowing into his eyes — or worse, glass from a broken windshield.

He is belted into his seat. No, not with that narrow belt and left-shoulder-only web from a street machine. That would allow him to flop around as if on an amusement park ride and he'd never be able to control the machine. First he is held down by a four-inch-wide seat belt that is locked tight. Attached to that are two huge shoulder belts — one over each shoulder — that are cinched down tight and then pulled even tighter. And just to keep him from sliding out from under all that protection, there is another belt that comes up between his legs called an anti-submarine belt.

continued



Padding surrounds the roll cage any place that the driver might bump it during an accident. The wire going into the roof is for the crew-to-driver radio.

Thirty-four Grand American cars chase Joe Ruttman through the esses toward turn six at the start of the Warner W. Hodgdon 300. At the end of 72 laps, the 1980 United States Auto Club Center Line Wheel Stock Car Champion was still leading the field by more than a minute.

Pole-sitter Darrell Waltrip leads the field into turn eight on the first of 119 laps. Starting last in the field of 36, the race winner Bobby Allison passed four by the time he reached turn six in the background and six more before completing the first lap.

Don't get the idea he is lounging on some super plush, easy chair — he's not. With very little padding, the seat is individually molded to fit him right up to braces that come up to his armpits to help combat G-forces in the turns.

Around, over, in front of, behind and to the sides of the driver is a cage of heavy steel tubing designed to absorb every possible impact of an accident and then some. Any place that the driver might bump this cage during an accident is padded for his protection. There's even a special net over the side window opening to keep his head inside the protective area of the roll cage.

Braces hold the front and rear glass in place. If the rear window were to "pop" out at racing speeds the vehicle aerodynamics would change so fast the driver would lose control of the car. The windshield is braced inside to keep it from being pushed in on the driver at speeds approaching 200 mph.

For fire protection there is a special extinguisher system inside the driver's compartment. There is also a heavy metal plate between his roll-caged area and the fuel tank. Additionally, inside the fuel tank is a cell that won't allow leakage if the tank is damaged.

Of course all the components that move and stop the car are also beefed up to take the strains of racing, including the special tires.

Stock car racing tires are deliberately over-engineered to withstand forces beyond what they will be subjected to in a race. And as odd as it may sound, this over-engineering means building tires with thin rubber treads and sidewalls. This minimizes excessive heat buildup which leads to tire failure. However, these thin treads and sidewalls are easily damaged. Once a tire is cut, it starts losing air which causes it to run hotter. Unless the driver has the cut tire changed, it will overheat and fail.

This is where NASCAR drivers have another safety factor — an inner safety shield that works like a spare within the race tire. If a tire is cut, the safety shield holds its pressure, allowing the driver to continue to the pits at reduced speed.

What are your safety factors on the street? First, and foremost, your speed and that of the traffic around you is much slower.

Motorcyclists have their helmets, eye protection, gloves, heavy-duty clothing and boots.

In street cars there are safety harnesses, padded dashes, safety-dished steering wheels, side impact door braces, testing to insure fuel tanks don't rupture during rear impacts, the 30-mph collision standard and tires that self-seal or at least slowly leak rather than blowing out.

But it doesn't make any difference if it is a race car or street machine, if the passengers don't use the safety equipment provided they are headed for harm. Winning race drivers

(left) Enclosed in a cage of steel tubes is the driver's seat. Note the seat side supports, wide belts and harness, netting that goes over the open window and fire extinguisher pull switch just below the gear shift lever.

(right)
Backyard mechanic's dream: Being able to get close to the work.

wouldn't dream of not employing all their safety factors. Would you?

Bobby Allison reflected this winning safety attitude during the recent Winston Western 500 held at Riverside International Raceway in Southern California.

First of all he was driving for a team that he trusted to build him a safe, strong machine. Secondly, he used all the safety equipment available to him. But more importantly, his attention to the total environment paid off at the end of the race with a $24,850 winner's purse.

When the track was too wet to drive on because of early morning rain, Allison waited with the other 35 drivers for more than half-an-hour before starting his car. He then slowly followed the pace care for eight laps as officials continued to check track surface conditions. Then he and fast-qualifier Darrell Waltrip went ahead of the pace car and ran a single race-speed lap to confirm that the track was safe for competition.

The night before the race Allison had had his crew make a change in the way the car was set up. During the pace laps he was "pretty sure I needed it" changed back. "But I found out when I ran hard we really needed it" changed back, he said after the race. "In a way, it (the single hot lap) was a big help to me. You know, talk about a lucky lap and that one was lucky."

Even though it meant not starting on the front row, Allison pitted on pace lap 12 to have the adjustment unmade. He stopped once more before the green flag at the end of the 16th pace lap to have his fuel supply topped off.

When the green flag flew, Bobby picked his way through traffic. He took the lead for the first time on lap 52 after two yellow caution periods totaling 18 laps. One caution period was to clean up oil from a blown engine, the other was because of a light rain that made part of the track slippery.

continued

Braking and turning don't work together as Steve Pfeifer discovers. His locked right front wheel smokes as he continues straight past the corner, unable to slow down or turn.

Late race traffic in turn nine finds race winner Bobby Allison (#28) about to lap Joe Millikan with Terry Labonte, Richard Petty, and Richard Childress about to drive into his trunk.

(above and below)
After the Riverside race all Grand National cars will be the 110-inch size such as those driven by 1980 Champion Dale Earnhardt (#2) and Neil Bonnett (#21).

Allison gave up his lead when he pitted at the start of a four-lap caution period for oil on lap 58. A two-lap caution period for an accident fell before Bobby again found himself leading at the start of another four-lap caution on lap 85. Again a minor accident caused that yellow.

Debris on the track from a blown engine brought out the final yellow flag for eight laps. With that, Allison dropped into the pits on lap 99 for tires and fuel before rejoining the cautioned pace in third.

The green flag was again waved and Allison had the lead before the lap was over. Twice he came up on slower traffic approaching turn six, and once, on lap 111, Labonte managed to squeeze by for the lead on the short chute between turns six and eight, only to have Allison reclaim the lead on the mile-long back straight.

At the end of 119 laps, Allison was rewarded with a victory margin of 1.73 seconds. He never discounted track surface conditions, stayed out of trouble when other competitors were having accidents and paid special attention to what his machine was telling him.

Allison's concentration on his total environment made him a winner. Similar attention on your part can help make you a safe driver.

BONDURANT U

Bobby Allison has won 455 races in his lifetime, 61 of them on NASCAR's tough Grand National circuit. After winning the Winston Western 500 at Riverside he expressed the challenge he felt from some of the younger drivers such as Ricky Rudd and Terry Labonte. "They're serious enough about what they are doing to really go to work at it," he explained. "And they try to learn the track, try to learn the car, and try to learn everything about it."

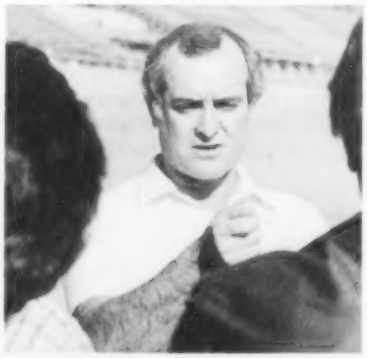
For Rudd, Labonte, Kyle Petty, Joe Millikan and five other drivers, learning the track included attending a special postgraduate all-day seminar with Bob Bondurant at Riverside the Wednesday before the race. The former international road racing star operates Bob Bondurant's School of High Performance Driving at Golden State International Raceway near Sonoma, Calif.

Warmly referred to as "Bondurant U," the school offers courses in competition road racing, advanced road racing, high performance driving, complete skid control and corporate chauffeur anti-terrorist/anti-kidnap driving. Bondurant's school became *the* school to attend after Neil Bonnett received some pointers about road racing last summer and

Bondurant's schooling is not classroom exercising. Most of the time is spent on the track following the instructor to learn braking points, corner lines and the finer arts of trailing braking.

Students who are all professional drivers such as Kyle Petty on the far left listen as Bob Bondurant explains the tricky approach to Riverside's turn six.

"Don't put your hand on my shoulder and ask 'Where's my check, Bob?' Suckering me into a turn at Phoenix so deep that I spun out doesn't qualify you as the 'King Richard Petty Driving School for Pros Over 40'!!!"



Techniques such as holding the steering wheel are just as important to road racing as is the proper line through a series of esses.

"You do understand the importance of 'heel-and-toe', don't you?"

nearly won at Riverside with a tire losing air.

When the green flag waved after the last caution period of the race, Labonte was just leading Allison. With 15 laps to go, Allison pulled out and passed Labonte on the long back straight. Twice Bobby was trapped behind slower cars going into turn six. Once Terry got past Bobby going across the short chute to turn eight, only to have Allison repass on the long straight to turn nine.

"I had a lot of engine," Allison commented. "And Terry recognized I had a lot of engine. Whatever I would gain he was making it back up in turn nine. I might have to stand out there at the next race and watch and see how he does that."

Labonte then observed that turns "six, eight and nine are real important corners. I really think it (Bondurant U) helped a lot."

Allison then interrupted with, "You gonna recommend me?"

To which Labonte retorted, "I don't think you need to go."

Both Allison and Labonte were aware that Bondurant was in the race with them. "Bondurant put on a heck of a run for quite a while, too," Allison declared. "He was in the thick of things there for a while. He really stood on the gas!"

To which Labonte replied, "It would have been pretty neat if I could have outrun him (Bondurant)."

Bondurant had transmission troubles on the first day of qualifying and ended up 26th on the grid. His qualifying time would have tied him for fifth fastest had it been turned on the first day instead of the second day of qualifying. He was running 10th on lap 30 when he was black-flagged for a minor oil leak. Despite a blown tire on lap 54 he was running eighth on lap 93 when his engine blew, ending his day.

(right, top to bottom)
Bondurant has his 03 car bumped off the track at turn 8 by 1979 LeMans winner, Don Whittington (#93). The trip through the desert cut one of Bob's tires, forcing him to stop in the pits without benefit of a yellow flag.

Timely Topics

DOT ISSUES HM GUIDEBOOK FOR EMERGENCY PERSONNEL

The Research and Special Programs Administration of the Department of Transportation is distributing a new publication to assist police, fire, and rescue personnel in managing hazardous materials transportation accidents. *The Emergency Response Guidebook* identifies a hazardous material by the four-digit number which will be displayed on the transporting vehicle. The *safety measures which should be taken* immediately after the incident are described. According to R&SPA administrator Howard Dugoff, emergency response teams will be able to determine quickly what hazards exist and "take steps to safeguard people and property."

The guidebook lists approximately *1,600 numbered hazardous chemicals and chemical groupings* that will match numbers appearing on display panels or placards on tank trucks, rail tank cars, and portable tanks. The identification system will not become mandatory until November 1, 1981; however, many carriers will begin displaying the numbers before then. The agency is now sending the first 200,000 copies of the guidebook to police and fire departments and rescue squads. In a few months, the publication is expected to be in more than *400,000 emergency vehicles*.

CAUSE/COST OF DEATH

What is the cause of death that costs society the most, in terms of the cost of health care and loss of economic productivity? Cancer is the correct response. But what's second? Heart disease? Good guess, but wrong. The second most costly cause of death is motor vehicle injuries. Heart disease is third, and stroke is fourth.

These facts are from a study done by Charles N. Smart, Nelson S. Hartunian, and Mark S. Thompson, the results of which were published in the December 1980 American Journal of Public Health.

The three-year research project revealed that in 1975, societal costs of cancer were $23.1 billion, while those for motor vehicle injuries were estimated at $14.4 billion. Costs of coronary heart disease totalled $13.7 billion and stroke costs were $6.5 billion.

The study's authors reported "In terms of total individuals affected, motor vehicle injuries dominate, with an incidence five times that of any of the other three impairments. Moreover, the age at incidence is younger — by three decades — for motor vehicle injuries."

An expanded report of the research project will be published in book form by Lexington Books, Boston.

BIKER TAKES 60-FOOT SLIDE

By Sgt KEVIN KOELLING
Lowry AFB, CO

The helmet-wearing airman lived to tell the tale.

"I would have been missing parts of both ears, if I had been alive at all," said Senior Airman Patrick A. McBride in describing his motorcycle mishap and telling why he was glad he was wearing a helmet.

The mishap occurred November 3 at 11:50 p.m. when McBride was traveling about 55 mph on an interstate and passing a car. He said his front wheel began to vibrate, then it pulled to the right suddenly. "I knew I had to get away from the bike and all that metal," he added.

McBride jumped.

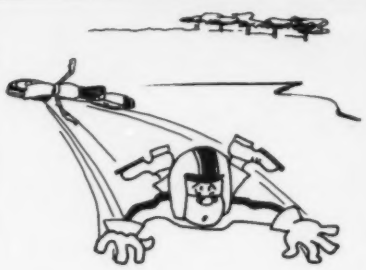
"My head and hand hit the ground and I went out," said the 26-year-old member of the 3415th Consolidated Maintenance Squadron. He continued, "When I woke up, I thought I was in Omaha, where I was born and raised. I didn't realize I was in Denver until I got to the hospital."

McBride estimates that he slid 60 feet and his bike slid 200 feet. "I wish I'd had leather all over," he said. "I was wearing leather gloves, but that asphalt tore the hell out of my pants and ski jacket." He also suffered a cracked rib and torn knee cartilage plus minor cuts and burns.

His helmet showed dents and other damage from the impact that could have been disastrous to an uncovered head.

McBride has been riding motorcycles nine years and owned one for six years. He said he became a "believer in helmets" six years ago after seeing a motorcycle accident victim.

"I was in a hospital for surgery on my hand. My roommate there had been involved in a motorcycle wreck. The head was the only part of his body that was undamaged. His helmet saved his life, and that convinced me right then to wear one."



IMPORTED SUBCOMPACTS HAVE WORST RATE OF INJURY CLAIM

A new survey of medical claims by the *Highway Loss Data Institute* has shown that imported subcompacts have the worst record for personal injury. Another HLDI study released last month also found this type of car at the bottom of the list for collision loss. The injury claims survey, covering *1977-79 model year cars*, showed that while there was a large variation among cars in all size and body style groups, *claims frequencies clearly declined as car size increased*. Data for the study were provided by nine insurance companies.

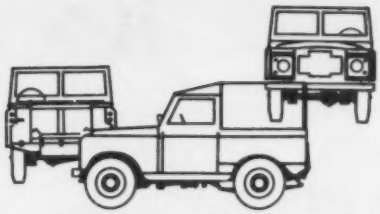
On the list of 22 models with the *worst loss experience*, the *first eight were either Japanese or Japanese-made*. At the top of the list were the Datsun 200SX, followed by the Plymouth Arrow, Datsun F-10, and Dodge Colt. The 200 SX had a relative claim frequency rate 71 percent higher than average.

The list of cars with the *best injury claims records* was totally dominated by the U.S. *All 24 cars were made in the United States* and 16 were manufactured by General Motors. Leading the best loss experience list were the Oldsmobile Toronado, Chrysler Newport, Buick Estate, and Oldsmobile Custom Cruiser. The Toronado's overall claim frequency rate was 43 percent lower than average.

(Highway & Vehicle Safety Report)

better safe than sorry

by 1Lt FRED MILLNIK
2069 Comm Sq/PAR
Nellis AFB, NV

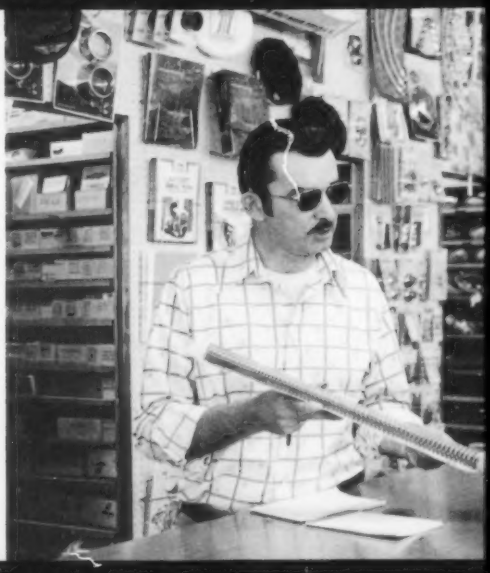


Radio, radar, and navigational aids technicians from the 2069th Communications Squadron traverse narrow, gravel roads, laced with steep inclines and sharp switchbacks, in order to reach the unmanned communications sites atop towering mountain peaks in Southern Nevada. Quick reflexes, a steady hand, and a trusty, four-wheel drive vehicle are a must to drive on the rugged terrain and narrow, mountain lanes.

There are no guard rails on these seldom-used roads, so a mistake could prove fatal. The 2069th is taking no chances. Technical Sgt. Timothy Puckett, 2069th safety NCO, has initiated a four-wheel vehicle driver training program which all newcomers must undergo prior to driving to the sites.

Since the needs for such a training program were unique to the 2069th, Sergeant Puckett developed his own plan which includes a rugged obstacle course. Once novice drivers and newcomers successfully complete the course, they are allowed to drive to the remote sites in the company of an experienced driver. As Sergeant Puckett explains, "It's better to be safe and undergo the training, than to be sorry later!"

Technical Sergeant Timothy Puckett, 2069th Communications Squadron safety NCO, observes a novice driver from the 2069th's four-wheel vehicle driver training course. (USAF photo by 1Lt Fred Millnik)



(top)
Once you've decided on the type of cycle you want, begin to make the rounds of the dealers. Pick a dealer that has a good reputation, a good repair facility, and plenty of bikes in stock.

(above, left)
If you see something you don't understand, ask about it. Make the salesman show you the safety features as well as the creature comforts.

Cheapie or chopper, new or nostalgic, racer or stocker . . . it's your choice

buying a motorcycle

(above, right)
Check out the dealer's parts stock. You want to be sure that if your bike breaks, the dealer stocks the parts needed to fix it.

So you've decided to do it, have you? You've convinced yourself that a motorcycle seems to offer the best transportation value in terms of purchase price, mileage, "repairability," and resale value. You even admit that there might just be a little "fun" involved with motorcycling, too, and having a vehicle that's fun is just as good a reason for buying a bike.

First things first: After you've made the initial decision to buy your first motorcycle, the thing to do is make up a checklist outlining what you want in a bike, right . . .? Well, not exactly.

We think there's an important step to be accomplished even before you make out that checklist. This first step should be *rider education.*

Basic rider education has several benefits. One: You get to learn to ride on somebody else's motorcycle . . . if you're gonna put scratches on a new motorcycle, why not put them on a machine that was designed for it? Two: When you show up at a motorcycle dealership and ask to test-ride the new $4,000 Yamasaki-Harleyson, the dealer may be a bit reluctant to let you take one out if you don't know how to ride. Three: The worst time to learn to ride is on your way home from the dealer's lot after picking up your new bike. We injure a lot of service people with that method of rider education.

The Motorcycle Safety Foundation offers an excellent learn-to-ride course that is reasonably priced. The learn-to-ride course is super, even for a person who used to ride but hasn't in the last five years. The course is usually available in most good-sized communities, but Base Motorcycle Clubs may have the course, too.

OK, now that you've taken an approved rider education course, move on to that pre-purchase checklist.

What do I want? Even if you don't know much about motorcycles *per se,* you still have an idea about what you want. You may want a small bike exclusively for commuting from the housing area to work, or perhaps you'll occasionally want to cruise down to the beach.

Some of us want a bike that will do double duty as a work/play machine. Use it to go to work Monday through Friday and then head off into the boonies on Saturday.

Others will want a real road machine, one capable of eating great stretches of highway in a single day.

Whatever the type of machine you want, be sure to define your motorcycling objectives before you begin touring the dealers. You can save yourself time and money by not going to a BMW dealer, for instance, if you know you want a dirt bike.

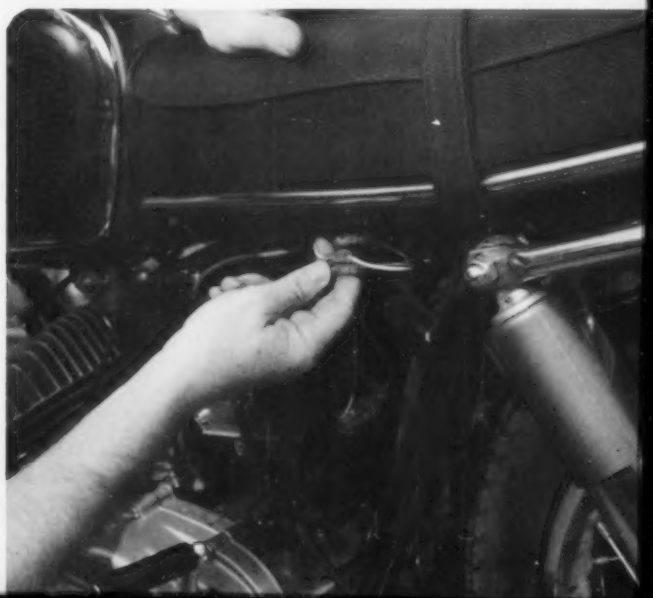
As you make your decision about the type of bike you want, consider the following hints . . . they may save you some money and/or grief:

■ Unless you are 100% positive that you will use the bike only for commuting, stay away from the small displacement models (under 200 cc's). Many people buy a tiddler for commuting and then get really turned-on to motorcycling. Then they have to go out and buy a bigger bike that will satisfy their desires. We would rec-

continued

A look at the repair portions of two dealerships. Which one would you let work on your bike? A sloppy work area *can* mean a sloppy mechanic or a bum dealer.

(left) Don't let a quick-talking salesman sell you something that you don't want. Reputable dealers don't use high-pressure tactics or come-ons to induce you to buy. **(right) If you're buying** a used bike, check out its appearance. If it *looks* like it has been abused, it probably has.



ommend a bike of less than 400 cc's displacement.

■ Dirt/street compromise bikes are exactly that . . . a compromise. They don't excel at either dirt OR street riding. They are suitable for short commutes to work, or play riding in the boonies. If you will be riding exclusively in the dirt, get a dirt bike.

■ Buying a used chopper is not a good move. If you want to go the chopper route, buy a stocker and then modify it. You not only get to choose what options and colors *you* want, but you get to control the quality of the reconstruction. When you buy a used chopper, you can't be sure what construction techniques were used.

■ Purchasing a used race bike *can* be a good deal because they are usually constructed with great care and attention to detail. Also, they probably have heavy-duty parts already installed, and usually are maintained by expert mechanics. You have to be careful in the selection of a used race bike, but remember that "never beaten" is a lot better than "never raced."

The new bike: You can be fairly sure of the mechanical integrity of a new bike, so that makes the purchase of a new bike a good idea if you can afford it.

According to Robert W. Peters, sales manager of Dale's Modern Cycle in San Bernardino, Calif., the most important thing to consider when buying a new bike is the dealer from whom you will purchase. Just because a dealership has been in business only a few years doesn't mean it's not a good one, but you'll probably be better off going to a long-established dealer who has a good reputation with local motorcyclists.

While you're at the dealer, check out his parts department and his repair facilities. Does he carry a good stock of spare parts or does he just have dress-up items? Is his repair shop overflowing with bikes awaiting parts, or is it busy with machines being worked on?

Does the dealer have a good selection of machines displayed or does he have two or three and will "order you anything you want"?

A dark, dirty shop doesn't necessarily mean the dealer is a bum, but it *may* indicate how he feels about his customers.

Dealers who sell more than one make of motorcycle may give you a better chance to compare those particular makes, and may even be able to give you a better "deal" on one make to keep his stock balanced.

Will dealers deal? *Most* of them will, if your timing is right. One of the best times to make a deal is about two months after new model introduction. Last year's models may have a substantial discount at this time. You may also have good luck at the end of the month. Some dealers establish quotas for sales, and dealers may move units at lower cost if they are near the end of the month but still haven't met their quota.

You can get single-point financing and insurance at many dealers. You walk in, make your best deal, give the man your downpayment (around 15%) and he arranges financing and insurance on the spot. It's quite convenient, but remember that you might get a better deal on both interest charges and insurance by shopping around.

One last thing to check out . . . bikes are sometimes cheaper in major cities than in rural areas. Large dealers in cities can sell cheaper because of volume, and smaller dealers in rural areas must often pay extra freight charges because of their distance from rail heads. Of course, you, the customer, will pay those extra charges.

Buying a used bike: Used equipment can be a tricky proposition, in more ways than the "pig in a poke" syndrome. It is harder to get financing on used bikes, and the needed downpayment is usually larger (percentage-wise) than for a new machine. Insurance should be cheaper though, and of course total cost will be lower than for new machinery.

If you'll follow a few simple guidelines, you can be assured of making the best choice. The following tips apply to most bikes . . . two-stroke, four-stroke, dirt or street.

It helps to have a friend who knows cycles, but even if you're not mechanically minded, you can get a *fair* idea of the condition of a bike just by looking at it. Generally, a person who keeps his machine lookin' sharp will take care of its mechanical needs as well. But if the critter looks like it's gone through a lot, if the paint is chipped or there's oil everywhere but on the chain, forget it. The general rule is: If it looks like it has been abused, it has!

The heart of the bike, and the part that costs the most to replace, is the engine. Check the engine and transmission out first . . . if you find problems here, don't even bother checking out the rest of the machine, just move along.

Unfortunately, you can't really "see" inside an engine, but you can hear it and feel it running. Be skeptical about unusual noises. Don't let the owner tell you "but all Yamasakis make that noise." Nine times out of 10, if the noise is unusual enough for you to notice it, it shouldn't be there.

Excessive vibration is often a sign that a main or rod bearing could be going out to lunch, or that the crankshaft is out of balance.

Take a piston compression check on a four-stroke or a crankcase com-

continued

(far left)
Before your test ride, check the condition of cables and controls, and test brakes and clutch for adjustment.

(near left)
Electrics can be a major source of trouble on a used bike. Check the condition of the battery as well as lights, connections, horns, etc.

continued

If the bike checks out OK, then try to make your best deal with the seller. Remember that dealerships aren't always the best place to get financing and insurance. You may be better off by shopping around for these items.

pression check on a two-stroke, and compare the readings against factory specs. More than 10% difference between specs and actual readings may indicate trouble.

Blue smoke coming from the exhaust of a four-stroke may mean a broken piston ring or blown head gasket. Check for oil leaks around the tachometer drive attach point . . . a leak indicates the owner doesn't care enough to fix the "small stuff" and that attitude could carry over to the big stuff as well.

Test ride helps: Make sure you know the locations of all controls and check clutch and brake adjustment. Then, if possible, take the bike for at least a 10-mile road test. Certain engine and transmission problems may not show up until the bike is thoroughly warmed up. If there are oil leaks, they'll show up then, too.

During the road test, pay particular attention to the transmission. It should shift smoothly and easily through the gears. If shifting is hard, if the trans mis-shifts, or if the transmission jumps out of gear, you definitely have problems.

Down-shifting is a good check on clutch condition. Clutch release and engagement pressure should not be excessive, although this could be caused by an improperly lubricated clutch cable.

A thorough road test will tell you a lot about the suspension, too. Ride down a rough stretch of road. If the forks and shocks bottom out easily, or seem too stiff, they're in poor condition. If any part of the suspension (particularly the swing arm and steering head bearings) is faulty, the bike may wobble or feel unstable. Incorrect tire pressure can cause this, too, so don't forget to check on that possibility.

Find a straight back road with little traffic, and then test the brakes. Accelerate to 30 mph, then brake gradually with both brakes. Next, try it at 50 mph. Do this several times, braking harder each time. If the brakes fade severely, causing you to use much more lever effort each time, the linings are probably glazed and need replacing. Disc-brake-equipped bikes should be put through the same tests. Fade here indicates that the pucks are about gone or that the brake rotor needs resurfacing.

After the road test, put the bike on its center stand so that one wheel at a time can be spun freely. Spin each to see if the rim is truly round, and look for side wobble.

Grab each wheel and push-pull on that turkey. If you get any deflection, the wheel bearings are bad or the spokes are loose.

Oil leaking from forks or shocks indicates that the seals are bad. Fork seals can be replaced but OEM (original equipment) shocks are not usually rebuildable.

Check the sprockets and chain (unless you're looking at a shaft-driven model). Teeth on good sprockets are symetrically shaped. Pointed, thin teeth and those with the tops broken off mean the sprocket needs replacing. Pull the chain away from the backside of the sprocket. If it moves more than half the length of a tooth, (about ¼ of an inch) it's stretched and'll have to be replaced. NOTE . . . make this check, and any involving the rear wheel, WITH THE ENGINE OFF!

Next, check out the electrical system. If the bike has a battery, disconnect the leads (ground lead first) and take the battery out of its holder for a close look. Most cycle batteries have clear cases, and you can easily check for correct electrolyte level. If the fluid is cloudy or has crystalline formations, the battery has gone "toes up." As a rule, bike batteries seldom last more than two years.

Try the horn and check the lights, along with any other accessory items.

Don't forget the obvious. A torn seat, worn tires, etc., will cost you money later.

Should the person selling the bike refuse to let you make these checks, politely tell him to stuff it in his hat, and then move on. The seller's probably got something to hide. You deserve to know what you're getting. After all, it's your money . . . and your hide, too, if the bike fails at the wrong time.

If you've checked it out, and it looks good, arrange to meet the seller at the DMV or Registry. Then, together, you can get the correct paper work all done and assure yourself that the title, etc., is in order.

Once properly registered and insured, you're free to go out and ride your new pride and joy. Whether you purchase a tiddler or a monster-bike, you'll be a motorcyclist . . . and welcome to the ranks!

by Lt. DICK PLUSH, USN
HC-3
NAS North Island, CA

Almost unwittingly, I have found that flying aircraft has made me a better creature of the highways! Scores of articles have been written about defensive driving, but the concept often remains an abstraction to an individual until he narrowly skirts death. Then he wonders how he could have been so blind for so long.

Based on my observations as both aviation and ground safety officer of a Navy helicopter squadron, and tempered with my love for sports cars and motorcycles, I particularly value a few hard-earned lessons which apply whether earthbound or airborne. In general, they seem to boil down to three general areas: plan, be aware, and use perspective.

The word "plan" denotes a lack of spontaneity to many folks, and therefore it becomes something to be avoided at all costs. In retrospect, however, I would think it safe to say that when A.J. Foyt makes an instantaneous, victorious pass on a tight curve at Indianapolis, his actions are made possible through prior thought rather than random impulse. His fine-tuned, comprehensive plan allows him infinite freedom to master all controllable situations in an instant.

Using a motorcycle trip as an example, it is simple to whip up a little plan each time you get ready to ride. Plan doubly: for the EXPECTED — trip duration, gas stops, CLOTHES, tires, WEATHER, traffic, minor maintenance, known obstacles and LUBRICATION, to name a few; and for the UNEXPECTED — surprise moving or fixed obstacles (animals, cars, rocks, potholes), vehicle malfunctions, environmental changes (fog, rain, wind gusts), ad infinitum.

Now that you're out of the driveway, *be aware*. Use all your senses, stand by your gut feelings, and *anticipate*. A moving visual scan of mirrors, gauges, highway periphery and the guy three cars ahead of you will reveal incredibly subtle but important cues of activity and relativity. An engine about to seize will probably chug briefly before it expires *au finale*. That fellow three cars ahead who swerves probably indicates that you'll need to swerve, too. That abrupt cliffside after the stretch of flatlands probably means gusting winds. These cues will elicit life-saving responses from you if you remain constantly AWARE.

And put the way you travel IN PERSPECTIVE — make it appropriate. Ever decide to roll on the throttle on a nice straight stretch of residential street, only to run over a cat darting out from under a car? Ever ride your trusty cycle to a party where you KNEW you were going to drink too many rusty screwdrivers? Ever risk a tight pass around a tractor trailer only to stop in front of him at the stoplight a half mile ahead? Or wear shorts and sandals *just this once?* And do you REALLY want to assert your right-of-way over even that VW who is three times your weight and size?

These ways of thinking will have a profound effect on your chances of survival on the asphalt. The following are some examples of these ideas in application:

Knowing that a motorcycle is difficult to spot in a car's rearview mirror even when in plain sight, a rider can *actively avoid* riding in an automobile's known blind spots. If traffic density requires you to spend some time in that blind spot, keep your thumb right over the horn button. Your awareness of his likelihood to cut in front of you, coupled with your readiness to instantly hit the horn, will catch him when he has made it only one quarter of the way into your lane — enough time for him to react and avoid you. (This works equally as well for a car.)

DEMAND your rightful "airspace" by actively and aggressively maintaining an ample stopping distance between you and the vehicle in front of you. If someone cuts in, give him some room by slowing slightly and pray for him to take corrective action.

Anticipate the possibility of your engine quitting by keeping two fingers loosely resting over the clutch lever as you ride. You can then instantly disengage the clutch and roll to a comfortable stop, rather than skidding to an uncertain conclusion.

Use visual cues (such as the painted line next to the shoulder) for reference in case your headlight suddenly fails or oncoming headlights blind you. And carry an extra headlight bulb, well padded, when riding at night.

Recognize a bad plan for what it is and change it enroute as necessary. Riding drunk into a rainstorm could be exciting but is more likely to be final.

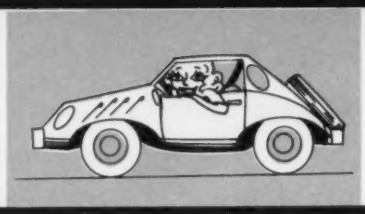
Finally, most obvious but most often ignored, dress *smartly*. Why wear steel-toed boots around an aircraft taxiing by at 5 mph, then switch to sandals on a cycle moving at 50 mph with your feet four inches above the asphalt? Double knit uniform trousers will clearly show the bloody parts but do nothing to prevent them; and ungloved phalanges (fingers) WILL sooner or later smart from either cold or lost skin. We don't even need to talk about helmets — use your head!

Hopefully these few ideas on how not to leave highway survival to happenstance will jog your mind into some thoughtful innovations of your own. Whatever you pilot, remember: plan, be aware, and use perspective, and assume that others around you have not bothered to even *consider* these very things.

See you on the road!

LETTERS to the EDITOR

Backfire



FEMALE SUPERIORITY?

One point needing further consideration is what are percentages of fatalities (male vs female) during inclement weather or at night and why? A strong possibility is the fact that fewer women drive during the high fatality periods. For example, in inclement weather, women tend to postpone beauty salon appointments and trips to the stores. However, despite changing roles, the man is still the primary bread winner and driving during inclement weather and/or at night is a must. Major contributing factors are poor visibility, fatigue, and in many cases, alcohol. Also at night, we tend to find that many of the women drivers become passengers.

On the other hand, who owns and drives the "egomobiles?" Right, the men! Why? To impress women. Maybe if women prefer men alive more than they need to be impressed, they should say so. Women are still a tremendous influence on society-pressured men that *have* to own an "egomobile." NOTE: I am not ignoring the fact that there are women who need "ego-mobiles" as much as men (the Mustang Sally and Little Old Lady from Pasadena syndromes).

Do us all a big service. Run a feature on the stats you hint at in "Female Superiority???" (December 1980 "Timely Topics"). I think many people can find out some shocking things about their ego-affected driving habits. After all, you asked for the comments, so you're stuck with the responsibility for putting us straight.

Keep up the great work that you do!

MSgt James J. Rose III, USAF
Scott AFB, IL 62225

You've got it figured right, Jim. Of the estimated 143.1 million drivers, about 76.6 million are males and 66.5 million are females. Males are involved in more than twice as many traffic accidents, and in more than four times as many fatal accidents, as women are. But, says the National Safety Council, the difference is due at least in part to differences in the amount of driving done by the members of each sex, and to differences in the time, place, and circumstances of the driving. So far as the ego thing is concerned, psychologists say the male is more likely to identify personally with his vehicle in terms of performance while the female is interested in styling, color, and comfort. These are generalizations and there are plenty of exceptions, so please, no mad letters!

HYPOTHERMIA

The school library here at Peru High School has for several years been receiving DRIVER Magazine. I have used it as a reference for my Driver Education students all that time. Not only can we learn from the well-written, well-thought-out articles, but also from the "Timely Topics" and the "Back-fire — Letters to the Editor." Often someone else's experiences are worth their weight in gold. Keep up the good work.

At this time I would like to add several facts in regards to your "Hypothermia — Give It More Repsect" article in the 1980 October issue. Not only do bike riders suffer from this condition, but many military personnel also backpack and hunt. These comments come from *The Sportsmedicine Book* (Little, Brown & Co.):

"A one-degree drop: Your speech becomes slurred.

"A two-degree drop: Your fingers become clumsy, feel numb and lose their strength. You start to shiver.

"A three-degree drop: Your feet lose their strength, and you stumble and fall.

"A four-degree drop: Your brain is affected and you have difficulty thinking clearly.

"A nine-degree drop: Shivering is replaced by muscle rigidity.

"A 14-degree drop: You lose consciousness and your heartbeat becomes irregular.

"A 23-degree drop: Death results from heart failure."

Robert Rumph
Peru, NY 12972

SNOW CRUISING

This office and the 48th Transportation Squadron follow DRIVER Magazine with enthusiasm. The item in the October 1980 "Backfire" regarding Snow Cruising is of particular interest, as winter draws on in the UK.

Cruise Control is installed in all our vehicles. Commonly called the operator. Anticipation, observation and a feel for the environment are all impulse-fed to a master computer behind the optics, which by virtue of its skill, experience and logic, commands the various outputs to adjust mechanical controls, direction and kinetic energy, so as to retain control according to Issac Newton's incomparable Laws of Motion.

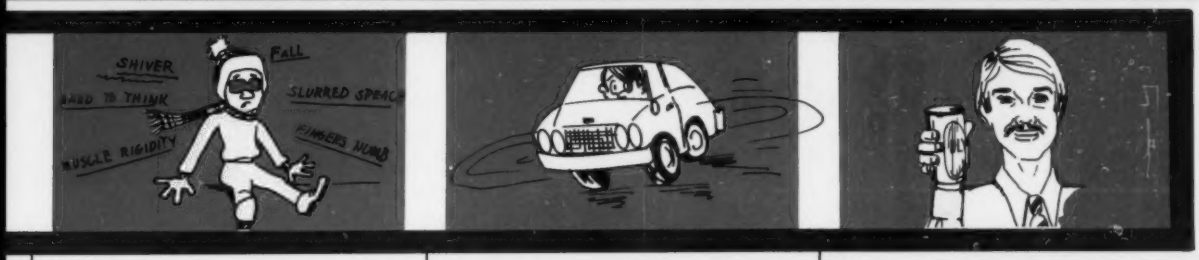
Feedback from visual references are monitored by the computer, mixed with crossfeed from constantly changing data ahead and behind. Mirrored images inform of rearward hazards. This process ensures that control and momentum remain related to environmental conditions, at the same time as other moving bodies, in juxtaposition, are accorded the information they require to maintain the status quo.

Simultaneously, compensation is made for circles, triangles and rectangles raised above the snow.

Despite the care we take with instruction and advice, we find too that in winter hazards our operators have occasional failures just as Lt. Benoit did. The moral is . . . Weather does not cause accidents, operators sometimes do.

James L. Horner, et al
RAF Lakenheath, UK

We couldn't have said it better ourselves!



WHO IS IN CHARGE?

Everybody in the safety business knows that most mishaps are caused by human error. In the driving world, less than 10 percent of collisions and conflicts are caused by environmental conditions or defective equipment over which the driver can exercise no control.

Personal responsibility, which includes self-discipline and self-control, is the essential ingredient that traffic safety educators find so difficult to instill in drivers of all ages. For this reason, we in the Safety Division at RAF Upper Heyford, England, were perturbed by the Timely Topic, "Tires at Fault," included in DRIVER Magazine for the month of October 1980. It was reported that the United States Court of Appeals had held the Ford Motor Company to be negligent and liable for damages in the case of the Louisiana driver who died while driving at 105 mph on tires not suitable for speeds in excess of 85 mph, at a time when he was also intoxicated by alcohol. Legal rulings such as this completely nullify all attempts by Safety people to foster common sense in driver attitude. Is it nothing that driving under the influence of alcohol is criminal folly, that 105 mph is all of 50 mph over the national speed limit?

The massacre of citizens on highways throughout the world will continue unabated so long as drivers are encouraged to ignore their responsibilities for operating a safe vehicle with due care and attention. Let's keep primary factors and contributing factors in proper perspective in defining the causes of mishaps.

We enjoy your magazine for its facts and comments and for the chance to refute some of the misconceptions about highway safety.

Mr. John E. Staples
APO New York 09194

We couldn't agree more, which is why we printed the item.

CRUISE CONTROL (CC)

Reference Lt Benoit's article in your October 1980 issue dealing with his car that was equipped with cruise control and his negative feelings while driving on ice and snow.

In 1976, while stationed in Detroit, Mich., I bought a Cordoba that was equipped with cruise control and had the opposite reaction while driving on ice and snow for three years in Michigan.

I always kept the CC engaged while driving the expressways on ice and snow. When the car would run over a stretch of ice or snow, the CC would take control and only let the engine spin an additional 3 to 4 mph, then revert back to its normal mph, whereas with driving without CC, the foot always tended to stay in the same place on the accelerator and by the time it registered to the brain that the rear end was kicking out, it was! This CC in Chrysler cars may be unique vs other cars (he did not state his model). I always engage the unit when traveling in the wintertime on expressways at speeds above 35 mph.

He also stated he has to tap the brakes to disengage his CC. I have the control switch mounted on the turn indicator and it is a simple matter to turn off or to resume. Difficulty is noted with wheel spin if I have it set at 55 mph and try to engage at lower speeds WHILE on ice. The car will try to maintain the 55 mph, thereby giving Lt. Benoit's experience.

I have learned not to engage (resume) the CC until I am at the speed I want to travel. Many times I have passed over ice on expressways and noted the speedometer run up 3 to 5 mph and settle down to its normal speed, thereby preventing a spinout. I would not be without it driving in the winter.

Yn1 G.K. Jingles, USN
USS AYLWIN (FF 1081)
FPO New York 09564

Our Tech Editor, a Michigander, doesn't believe in "black ice," that is, ice that takes you by surprise because it gives no visual warnings of its presence. He says there are always clues that ice is probably ahead – overpasses, shadows of buildings, trees, bridge railings, etc. He advises not engaging the cruise control when you think ice may be coming up along your route. Then, when the vehicle hits an ice patch, you can take your foot off the accelerator and glide forward, straight and unspinning, to the dry surface on the other side. As our letterwriter points out, with the CC engaged the car will accelerate while on the ice. Under some circumstances, a speed-up of just a few mph could be dangerous.

KUDOS

We commend Jeri Rood and your staff for the excellent article, "The Ubiquitous Booze," in the September 1980 DRIVER. The article was concise, pertinent, and covered material we believe essential to public awareness. Your well written article held the interest of readers. Feature articles such as this — and in forums like DRIVER — are necessary to continue educating our personnel. We encourage future articles of this type.

Mr. Jeri Rood deserves high marks for writing one of the best articles we have seen. Intoxicated drivers are among the most frightening — and needless — threats we all face today. Our thanks to Jeri and the DRIVER staff for keeping the prevention effort going.

MSgt John W. Middleton, USAF
HQ TAC/DPZ
Langley AFB, VA 23665

Jeri and the DRIVER staff thank you for the kind words.

☆U.S. GOVERNMENT PRINTING OFFICE: 1981 783-022/03

1876
hmmm...
Ace a Clubs...
Ace a Spades...
Eighta Spades...
Eighta Clubs...
Fiva Hearts...
LOOKITY THAR, CALAMITY JANE! BLACK ACES 'N EIGHTS! Naow whut kinda poker hand is that there ?
BANGO! ever friday night
WILD BILL, that there's a DEAD MAN'S HAND, or my name aint: "THAT DIRTY RAT, JACK McCALL" !
Happy Hour 0530 -0630
1981
hmmm...
Ace a DRUNK...
Ace a ROTTEN CAR MAINTENANCE...
Eight a SPEEDIN'...
Eighta FAILURE TO YIELD...
Fiva FOLLOWIN' TOO CLOSE...
LOOKITY THAR, CALAMITY JANE! BLACK ACES 'N EIGHTS! Naow whut kinda poker hand is that there ?
YOU LOSE
Wild Bill Hickok
had his "DEAD MAN's HAND" and the driver might have one, too.